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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
KNEPPER, DAVID D

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/311,333	ZIMMERMAN ET AL.	
	Examiner	Art Unit	
	David D. Knepper	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8 March 2002 (paper #6)* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *08 March 2002* is: a)☐ approved b)☒ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. Applicant's correspondence filed on 8 March 2002 (paper #6) has been received and considered. Claims 1-16 are pending.

Abstract

2. The Abstract of the Disclosure is objected to because the first sentence is redundant over the rest of the abstract and should be deleted. The use of the term "method" should also be deleted since this can be interpreted as a legalistic term more appropriate to the claims. Correction is required. See M.P.E.P. § 608.01(b).

3. The amendment filed 8 March 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows.

The second description of figure 2 added to page 7, line 13 contradicts the first description and must be removed.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. The amendment of paper #6 improperly identifies drawings to be entered into the specification. 37 CFR 1.121 has no provision for this method of making an amendment. The applicant is required to add all of the tables improperly labeled as drawings into the specification in accordance with 37 CFR 121.

NOTE: it is assumed that table 1A and 1B were improperly labeled as drawings 3A and 3B. The previous office action (paper #5) only referred to them as figures 3A and 3B. These tables should be separately added and numbered as six tables with appropriate text describing the labels/abbreviations.

The substitute paragraphs were entered.

Drawings

5. The drawings are objected to because figures 3A, 3B, 4A and 4B are tables of data and descriptive matter which should be part of the specification.

The addition of descriptive matter to figure 1 is objected to. Listing example features in text does not serve the same purpose as showing a figure of the features.

Correction is required.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "adaptation algorithm", "digitally-encoded speech waveform data", "acoustical model", "Hidden Markov Model", "Word Bigram Statistics", "pronunciation model", "phonetic transcription lexicon", "memory medium", "code to enable live input data reception", "applying code to apply a given adaption algorithm to the received live input data" and "updating code" must be shown or the feature(s) canceled from the claim(s).

Listing the features (as words) noted above in text does not serve the same purpose as showing a drawing of the features. The applicant is may find it necessary to review 37 CFR 1.84

for alternatives that are acceptable as drawings.

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claims

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for claims 1-15, does not reasonably provide enablement for automatically updating some sort of "code". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with this claim.

The language of claim 16 refers to memory "including code" and indicates that the code itself is applied and updated. The specification fails to teach how to make and use any type of code that can adapt itself. The claim indicates that "applying code to apply a given adaptation algorithm" which is interpreted as meaning that the code is actually the algorithm (some unique code). The specification fails to teach any such unique code.

In other words, the specification fails to support code which can not only update

particular recognition data but can modify itself . This, if enabled, would allow an algorithm to modify itself and would actually change the algorithm to employ a different (modified) algorithm every time it is operated.

To further prosecution, the claim is interpreted as a computer program that implements the method using a conventional computer programming language and "updating code" is interpreted as just updating data in the speech recognizer.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-16 are rejected under 35 U.S.C. § 103 as being unpatentable over Sabourin (6,208,964).

As per claim 1, "improving the recognition accuracy of a speech recognizer" is taught or suggested by Sabourin's adaptive speech recognition (abstract):

> "deploying the speech recognizer" (his speech recognition of figure 2);
>
> "collecting live input data" (his speech source 100);

"without supervision, applying a given adaptation algorithm to the received live input data" (his adaptation module 112 which improvement is done to automate partially or fully the training of a speech recognition dictionary in a speech recognition system, col. 1, lines 10-11); and

"redeploying the adapted speech recognizer" (suggested in that he teaches that adapting the recognition system is for the purpose of improving it for later use – read abstract).

It is noted that Sabourin does not explicitly teach the "redeploying". However, he teaches that the improvement made through updating the system can be used later. Thus, it would have been obvious for a person having ordinary skill in the speech recognition, at the time the invention was made, that the updating process of Sabourin could be used to improve any speech recognition for later use because this is Sabourin's purpose for improving recognition.

Claim 2: The prior art uses a computer 500, fig. 5.

Claim 3: Data may be contained in storage 500 which is not directly recognizable by a human, fig. 5.

Claim 4: Speech is not instantaneous and, therefore, must inherently be collected over time.

Claim 5, 9: The use of acoustically significant phonemes is taught in column 5.

Claim 6: The use of Hidden Markov Models is taught column 4.

Claim 7: The use of a language model is taught by his use of a lexicon 302.

Claim 8: Official Notice is taken that the use of bigram statistics is well known for use in context dependent HMM such as taught by Sabourin.

Claim 10: Transcription is taught by Sabourin (see title).

Claims 11-14 are rejected under similar arguments as applied above.

Claim 16 is presumed to be an attempt to claim a computer program that performs the previously claimed method (claim 1, for example).

REMARKS

11. The applicant's argument that Sabourin fails to teach applying a given adaptation algorithm to the received live input data as it is being recognized is not persuasive because he teaches automate partially or fully the training of a speech recognition dictionary in a speech recognition system, col. 1, lines 10-11. The term automate means to perform automatically without user intervention. Therefore, the automation of a training algorithm for speech recognition would teach one of ordinary skill in the art that instead of forcing the user to keep selecting a training process every time a correction is needed, the training would be done automatically.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. **Any response to this action should be mailed to:**

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

TC2600 Fax Center
(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Knepper whose telephone number is (703) 305-9644. The examiner can normally be reached on Monday-Thursday from 07:30 a.m.-6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold, can be reached on (703) 305-4379.

Any inquiry of a general nature or relating to the status of this application should be directed to customer service at (703) 306-0377.

The facsimile number for TC 2600 is (703) 872-9314.

David D. Knepper
Primary Examiner
Art Unit 2654